

Two New Species of *Orus* from California

(Coleoptera: Staphylinidae)

IAN MOORE AND E. F. LEGNER¹

Division of Biological Control, University of California, Riverside, 92502

The genus *Orus* was completely revised by Herman (1964, 1965). In his revision he gave detailed drawings of the male secondary sexual characters and of the aedeagus of each species making identifications of male specimens positive. Two new species not represented in the material which Herman examined have come to hand from areas in California. These are described and illustrated below. Both belong to the subgenus *Orus* (*sensu stricto*).

KEY TO THE MALES OF ORUS (*s. str.*)

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| 1. | Last visible abdominal sternite shallowly incised | 2 |
| | Last visible abdominal sternite deeply incised | 3 |
| 2. | Fifth visible abdominal sternite emarginate; neck one-fifth the width of head | <i>montanus</i> Fall |
| | Fifth visible abdominal sternite sinuotuncate; neck one-fourth the width of head | <i>shastanus</i> Casey |
| 3. | Fifth visible abdominal sternite sinuate along the posterior margin | <i>sinuatus</i> Herman |
| | Fifth visible abdominal sternite with the posterior margin lobed or emarginate | 4 |
| 4. | Fifth visible abdominal sternite emarginate | 5 |
| | Fifth visible abdominal sternite lobed | 7 |
| 5. | Fifth visible abdominal sternite deeply emarginate (Fig. 1) | <i>giulianii</i> Moore and Legner, n. sp. |
| | Fifth visible abdominal sternite shallowly emarginate | 6 |
| 6. | Fifth visible abdominal sternite deeply impressed (Fig. 2) | <i>frommeri</i> Moore and Legner, n. sp. |
| | Fifth visible abdominal sternite very shallowly impressed | <i>fraternus</i> Fall |
| 7. | Fifth visible abdominal sternite with a tubercle | 9 |
| | Fifth visible abdominal sternite without a tubercle | 8 |
| 8. | Paramere short, not extending beyond apex of median lobe, broad, with lateral margins straight in dorsal aspect | <i>hemilobatus</i> Herman |
| | Paramere long, extending beyond apex of median lobe, slender, with lateral margins sinuate in dorsal aspect | <i>punctatus</i> Casey |
| 9. | Abdominal tubercle well developed, margined laterally by carina; metafemora carinate | <i>femoratus</i> Fall |
| | Abdominal tubercle feeble, not margined by carina; metafemora not carinate | <i>distinctus</i> Casey |

¹ Staff Research Associate and Associate Professor of Biological Control, University of California, Riverside, respectively.

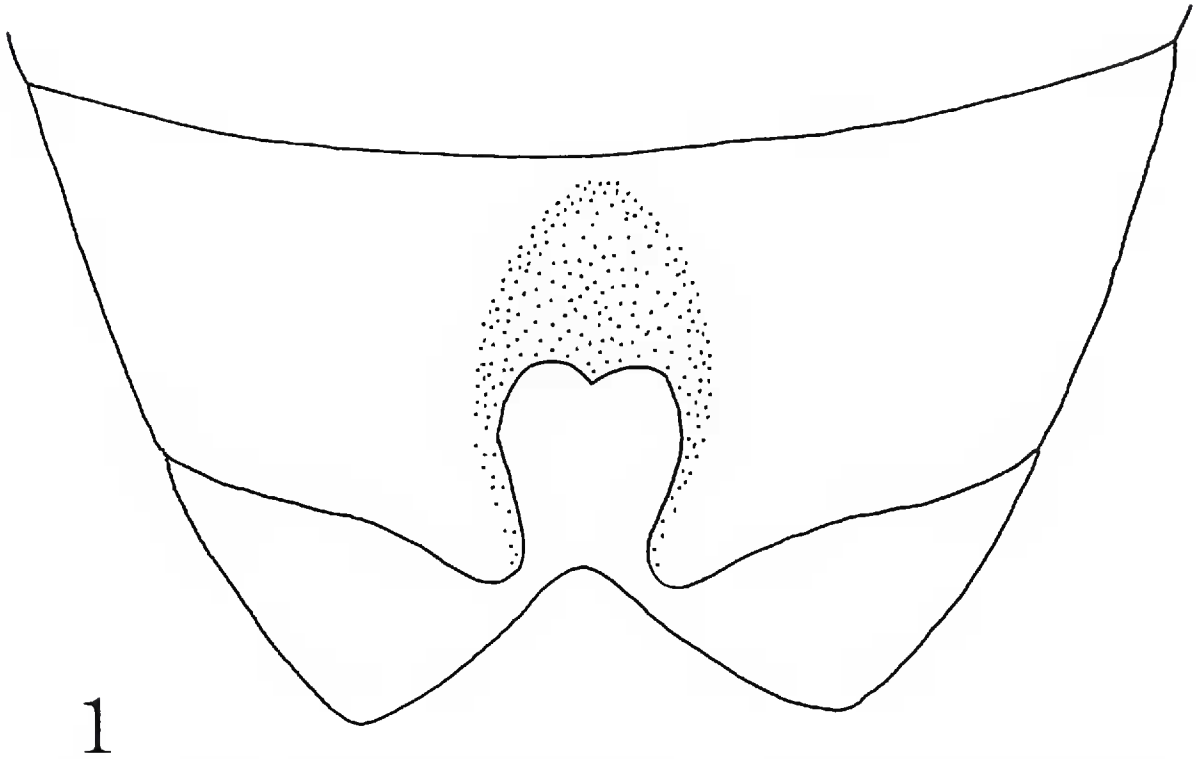


FIG. 1. Fifth and sixth visible sternites of male of *Orus giulianii*, new species.

***Orus giulianii* Moore and Legner, new species**

HOLOTYPE MALE.—Piceous with tarsi and mouth parts just perceptibly paler. *Head* one-fourth longer than wide; above finely, densely punctured and finely, densely microreticulate, beneath sculptured much as above except smooth and not impressed gula. *Pronotum* one-tenth longer than head, one-fifth longer than wide, surface sculptured much as head except for vague smooth central longitudinal area. *Elytra* one-fourth longer than pronotum, conjointly nine-tenths as wide as long, surface sculpture much like that of pronotum. *Abdomen* more finely punctured than elytra, finely microreticulate; first four visible sternites unmodified; fifth visible sternite with the posterior margin deeply emarginate, bottom of emargination produced as small cusp, sides of emargination slightly convergent posteriorly; sixth sternite with posterior margin moderately deeply incised.

Holotype male, OAK CREEK, INYO COUNTY, CALIFORNIA, 4,100 feet elevation ultraviolet black light, June 1971, Derham Giuliani collector [California Academy of Sciences]. Paratypes, same data as holotype (1 male); Big Pine, Inyo County, California, ultraviolet black light, July 1970 (4 males); March 1971 (1 male), Derham Giuliani collector [California Academy of Science and University of California, Riverside]. We have also seen twenty-two females with the above data which are not designated paratypes.

The modifications of the fifth and sixth sternites of this species are similar to those of *O. ferrugineus* and *O. guatemalensis*, both of which belong to the subgenus *Leucorus* having either a bidentate or edentate

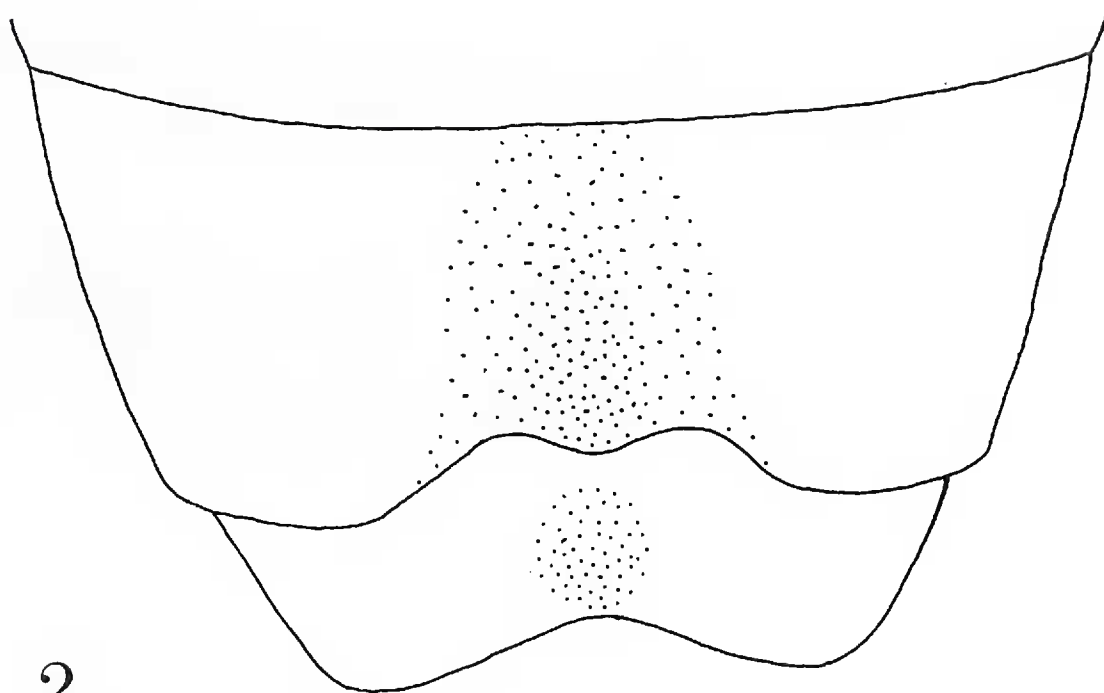


FIG. 2. Fifth and sixth visible sternites of male of *Orus frommeri*, new species.

labrum. The labrum of *O. giulianii* is distinctly and strongly quadridentate and the sixth sternite is more shallowly and broadly incised than those of the two species mentioned above.

***Orus frommeri* Moore and Legner, new species**

HOLOTYPE MALE.—Castaneous with head and bases of elytra darker, legs testaceous, beneath testaceous. *Head* one-fifth longer than wide; finely somewhat densely punctured above with very feeble microreticulation; beneath sculptured much as above except highly polished and not impressed gula. *Pronotum* one-tenth longer than head, seven-tenths as wide as long; sculpture very similar to that of head. *Elytra* one-fifth longer than pronotum, conjointly four-fifths as wide as long; surface densely but somewhat more coarsely punctured than head and pronotum, with more pronounced ground sculpture. *Abdomen* very finely punctured with fine but dense microreticulation; with first four visible sternites unmodified; fifth visible sternite with posterior edge emarginate, bottom of emargination shallowly sinuate, surface of sternite deeply, broadly impressed for its entire length before emargination; sixth visible sternite moderately incised, shallowly impressed in middle.

Holotype male, VICINITY OF SANTA YNEZ RIVER, SANTA BARBARA COUNTY, CALIFORNIA, 1,000 feet elevation ultraviolet and white light, 13 June 1971, Saul Frommer collector [California Academy of Sciences]. *Paratype male*, same data as holotype (1 male) [University of California, Riverside].

This species is most similar to *O. sinuatus* in the secondary male sexual characters. It differs from that species by the more deeply emargi-

nate posterior margin of the fifth visible sternite and the more shallowly incised posterior margin of the sixth sternite and particularly in the wide, deep impression on the surface of the fifth sternite.

LITERATURE CITED

- HERMAN, LEE H., JR. 1964. A revision of *Orus* Casey. I. Subgenus *Leucorus* Casey and a new subgenus (Coleoptera: Staphylinidae). *Coleopt. Bull.*, 18: 112-121.
1965. Revision of *Orus*. II. Subgenera *Orus*, *Pycnorus* and *Nivorus* (Coleoptera: Staphylinidae). *Coleopt. Bull.*, 19: 73-90.
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BOOK REVIEW

THE LIVES OF WASPS AND BEES. By Sir Christopher Andrews. American Elsevier Publishing Company, Inc., New York. 204 pages, illus. 1970. \$5.75.

As a popular account of the life histories of aculeate Hymenoptera attempting to "show that among wasps and bees in particular there are many with fascinating and often bizarre habits" the book is generally successful. The book consists of 27 short, easy to read chapters, 16 plates of excellent photos, and 15 additional well drawn figures. For the systematically oriented, scientific names of species mentioned along with phonetic guides to their pronunciation appear at the end of each chapter, and the higher classification (superfamilies to genera) of the taxa treated follows the last chapter. The numbers of chapters devoted to wasps versus bees or to those with solitary versus social habits balance nicely. The author limits coverage principally to species of Europe and North America and to some of the more general literature principally in English from 1905-1967.

Errors consist of several types: Typographical errors (e.g. the first initial for K. V. Krombein on page 44; *Bembix* captures flies resting, not "nesting on vegetation" on page 55; etc.); Misleading statements (e.g. from the discussion on page 28 one expects to see a grasshopper, not a caterpillar in plate 2A; the title "Some Wood-borers" for Chapter 6 which deals with species of *Trypoxylon* which use pre-existing cavities or construct pipe-organ mud nests); and Errors of omission (e.g. works of many European and American authors including Friese, von Frisch, Grandi, Malyshev, Linsley & MacSwain, Plath; discussion of massarid wasps). The errors of omission disturb only specialists and other errors are easily overlooked by the general reader.

This popularized treatment does expose some of the marvels of the insect world to public view. As such it provides entertaining and informative reading for those whose knowledge of bees and wasps does not extend much beyond the habits of honey bees and yellow jackets.—R. W. THORP, *University of California, Davis*, 95616.